

Applic. No.: 10/626,955

Amdt. Dated May 24, 2005

Reply to Office action of March 11, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claim 1 (currently amended). An integrated synchronous memory operable at different operating frequencies, comprising:

a register storing a frequency-range information item regarding whether the integrated synchronous memory operates in a first frequency range or in a second frequency range in an application, the second frequency range being lower than the first frequency range; and

a subcircuit having a mode of operation controlled on a basis of the frequency-range information item stored in said register, said register connected to said subcircuit;

said subcircuit containing a delay locked loop circuit having a variable delay, the variable delay of said delay locked loop circuit being altered on a basis of the frequency-range information item stored in said register.

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Claim 2 (original). The integrated synchronous memory according to claim 1, wherein said register is a mode register.

Claim 3 (cancelled).

Claim 4 (currently amended). The integrated synchronous memory according to claim [[3]] 1, wherein said delay locked loop DLL circuit has a signal path with a delay line, said delay line having parts being able to be connected or disconnected on a basis of the frequency-range information item stored in said register.

Claim 5 (currently amended). The integrated synchronous memory according to claim [[3]] 1, wherein said delay locked loop DLL circuit contains a signal path having a delay line with a series circuit formed of inverter stages, said inverter stages having a switching speed controlled on a basis of the frequency-range information item stored in said register.

Claim 6 (original). The integrated synchronous memory according to claim 5, wherein said inverter stages have current sources with a current driver capability controlled on a basis of the frequency-range information item stored in said register.

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Claim 7 (currently amended). A memory configuration,
comprising:

a memory module having at least one synchronous memory, said
synchronous memory containing:

a register storing a frequency-range information item
regarding whether said synchronous memory operates in a
first frequency range or in a second frequency range in
an application, the second frequency range being lower
than the first frequency range; and

a subcircuit whose mode of operation can be controlled on
a basis of the frequency-range information item stored in
said register, said register connected to said
subcircuit; and

a controller connected to said memory module and setting said
register; and

a programmable read-only memory storing a module information
item regarding a cut-off frequency used for operating said
memory module in an application, said controller reading the
module information item from said programmable read-only

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memory and setting said register in said synchronous memory
with a corresponding frequency-range information item.

Claim 8 (cancelled).

Claim 9 (currently amended). The memory configuration according to claim [[8]] 7, wherein said memory module is a DIMM module, said synchronous memory is an SDRAM, and said programmable read-only memory is an SPD register.

Claim 10 (original). The memory configuration according to claim 7, wherein said controller, in an energy-saving mode of the memory configuration, writes the frequency-range information item to said register of said synchronous memory to operate said synchronous memory in the second frequency range in the application.